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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Ronald L. Mahany

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EXAMINER

MAI, THIEN T

ART UNIT

PAPER NUMBER

2876

MAIL DATE

DELIVERY MODE

07/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

TH

Office Action Summary	Application No.	Applicant(s)	
	10/646,318	MAHANY ET AL.	
	Examiner	Art Unit	
	Thien T. Mai	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 56-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 56-72 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgement

1. Acknowledgement is hereby made of the amendment and drawings filed 10/24/2006. Claims 56-72 remain under prosecution and are presented herein.

Objections

2. Claim 56 lines 8-10, it is unclear as to which (connector or communications module) is to transmit signals. Likewise, it is unclear as to which is to standardize logic levels. The same objection is raised for claim 60 lines 9-10,
3. Claim 56 line 9, claim 60 line 10, claim 65 line 7, "the logic levels" and "the format" lack antecedent basis.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Re claim 64, it is unclear what is meant by "the terminal is responsive to the non-operation of the communications module for opening the switch". It appears that the limitation "the non-operation of the communications module for opening the switch" causes the opening of the switch already; hence there is no need for the terminal to further sense and remove the power from the module. Clarification is requested.

Claim Rejections - 35 USC § 103

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim(s) 59-63, 69-72 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Gombrich et al. (US 4,857,716) in view of Scholz (US 4,644,366) further in view of Katner (US 5,059,951)

Gombrich et al. discloses an apparatus comprising: a data terminal; a wireless (Fig. 1) communications module comprising a transceiver arranged to transmit and receive radio frequency signals; at least one antenna (Fig. 10, 1) coupled with the transceiver; and a connector attached to a pen/wand scan terminal (see Fig. 12) arranged to couple the communications module with the terminal and to transmit signals, wherein the terminal is coupled with the connector and is arranged to standardize the logic levels and the format of the signals transmitted over the connector (signals collected from the wand/pen) such that the terminal may be engaged by the communications module through the connector without adjustment of the communications module. The module has On/Off switch (col. 12 lines 15+) to manually turn off the terminal and communication module when there is no operation. Gombrich is silent with respect to the connector being removable. It would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that the connector indicated by numeral 120 in Fig. 12 is removable from a receiving opening as seen in Fig. 11; One skilled in the art also recognize that mere making a part integral or

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separable has no patentable weight. *In re Dulberg*, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961). *Schenck v. Nortron Corp.*, 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983). *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965).

Gombrich et al. is silent with respect to the antenna being embedded in the terminal.

Scholz discloses such antenna is known in the art. Scholz discloses flat antenna 50 on a circuit board and embedded in the cover 15 of a terminal 10 (Fig. 1-5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Scholz in order to minimize the thickness of the antenna so that the terminal can be less bulky to carry or for storage.

Gombrich et al. further is silent with respect to the at least one antenna comprises a pair of flat antennas.

However, the Court has ruled that mere duplication of parts has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of the Court to provide a redundant antenna to use it as a backup for the possibility of the other antenna being failed.

Gombrich et al. further silent with respect to the at least one antenna comprises two antennas having different structure relative to each other.

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Katner discloses an antenna coil 29-30 (Fig. 4) embedded in a scan terminal for reading RFID tags 3 (Fig. 1-2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Katner in order to provide means to read/scan additional type of tag beside barcode. Note that although Katner's terminal communicates to a host using wired means 32. However, this can be replaced with wireless means well known in the art as also discussed above.

7. Claim(s) 65-68 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Zouzoulas et al. (5,059,778) in view of Gombrich et al. (US 4,857,716) further in view of in view of Scholz (US 4,644,366) further in view of Katner (US 5,059,951)

Zouzoulas discloses a connector (Fig. 4-5) arranged to releasably engage a communications module 30, 300 with the terminal and to transmit signals; and

a housing enclosing the terminal 10, 100 and defining an opening arranged to receive the communications module and to guide the module into contact with the connector, wherein the terminal is arranged to standardize the logic levels and the format of the signals transmitted over the connector such that terminal may be engaged by the communications module through the connector without adjustment of the communications module or the terminal (terminal 10,100 has a barcode scanning circuit and/or means and a circuit board 107 that is configured to convert analog signals to digital logic levels).

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Zouzoulas is silent with respect to the communications module to receive and transmit RF signals.

Gombrich et al. discloses an RF module connected to a pen barcode reader (Fig. 12). see also discussion regarding claim 56 above. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Gombrich et al. to provide wireless communication capability preferable over cable RS-232 connection.

Zouzoulas/Gombrich et al. is silent with respect to the antenna being embedded in the terminal.

Scholz discloses such antenna is known in the art. Scholz discloses flat antenna 50 on a circuit board and embedded in the cover 15 of a terminal 10 (Fig. 1-5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Scholz in order to minimize the thickness of the antenna so that the terminal can be less bulky to carry or for storage.

Zouzoulas/Gombrich et al. further is silent with respect to the at least one antenna comprises a pair of flat antennas.

However, the Court has ruled that mere duplication of parts has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of the Court to provide a

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redundant antenna to use it as a backup for the possibility of the other antenna being failed.

Gombrich et al. further silent with respect to the at least one antenna comprises two antennas having different structure relative to each other.

Katner discloses an antenna coil 29-30 (Fig. 4) embedded in a scan terminal for reading RFID tags 3 (Fig. 1-2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Katner in order to provide means to read/scan additional type of tag beside barcode. Note that although Katner's terminal communicates to a host using wired means 32. However, this can be replaced with wireless means well known in the art as also discussed above.

8. Claim(s) 64 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Gombrich et al. (US 4,857,716) in view of Zouzoulas et al. (5,059,778)

Zouzoulas et al. discloses an apparatus comprising a terminal 10, 100 and communication module 30, 300 (Fig. 1-2, col. 8 line 37) wherein power to the wireless battery operated module 300 is removed when inactivity is sensed (col. 8 lines 60-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Zouzoulas et al. in order to conserve the battery power of the handheld battery operated apparatus.

Double Patenting

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9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claim(s) 56, 60, 65 is/are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9, 77, 91-96, 105-109 of U.S. Patent No. 5,410,141, referred to as Patent '141. Although the conflicting claims are not identical, they are not patentably distinct from each other because they essentially reciting the same limitations of the claims.

Claim 56 is rejected in view of claim 105 of Patent '141 in that claim 105 of the patent recites:

- a terminal (see base claim 91)
- a wireless communication module (see claim 105) which inherently implies the use of an antenna; the antenna is embedded within the module (claim 94)
- a connector means (see claim 105)

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Claim 60 is rejected in view of claim 105 of Patent '141 in that claim 105 of the patent recites:

- A portable terminal of size and weight carriable by a user (see base claim 91)
- a wireless communication module (see claim 105) which inherently implies the use of an antenna; the antenna is embedded within the module (claim 94)
- a connector means (see claim 105) to releasably engage the wireless communications module with the terminal
- the terminal is arranged to standardize logic levels of the coupled signals transmitted over the connector such that the data collection is engaged by the communications module through the connector without adjustment of the communications module or the terminal (see claim 105)

Claim 65 is rejected in view of claim 105 of Patent '141 in that claim 105 of the patent recites:

- A portable terminal of size and weight carriable by a user (see base claim 91)
- a wireless communication module (see claim 105) which inherently implies the use of an antenna
- a connector means (see claim 105) to engage the wireless communications module with the terminal; the antenna is embedded within the module (claim 94)
- a housing means (see base claim 91) to receive plurality of integratable modules inherently including the wireless communication module which

- together with the portable terminal inherently imply having size and weight to be maneuverable with only one hand of a user
- the terminal is arranged to standardize logic levels of the coupled signals transmitted over the connector such that the data collection is engaged by the communications module through the connector without adjustment of the communications module or the terminal (see claim 105)

11. Claim(s) 57-59, 61-64, 66-72 is/are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9, 77, 91-96, 105-109 of U.S. Patent No. 5,410,141, referred to as Patent '141 in view of Scholz (US 4,644,366) further in view of Katner (US 5,059,951) and Zouzoulas (5,059,778). The teachings of Patent'141/Scholz/Katner/Zouzoulas have been discussed above.

As seen, Patent'141 lacks the flat antenna or further lacks the structure of two antennas being different.

Scholz discloses such antenna is known in the art. Scholz discloses flat antenna 50 on a circuit board and embedded in the cover 15 of a terminal 10 (Fig. 1-5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Scholz in order to minimize the thickness of the antenna so that the terminal can be less bulky to carry or for storage.

Katner discloses an antenna coil 29-30 (Fig. 4) embedded in a scan terminal for reading RFID tags 3 (Fig. 1-2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Katner in order to provide means to read/scan additional type of tag beside barcode.

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Note that although Katner's terminal communicates to a host using wired means 32.

However, this can be replaced with wireless means well known in the art as also discussed above.

Zouzoulas et al. discloses a scanning apparatus comprising a connector 10, 100 and data terminal 30, 300 (Fig. 1-2) wherein power to a wireless battery operated module 300 is removed when inactivity is sensed (col. 8 lines 60-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Zouzoulas et al. in order to conserve the battery power of the handheld battery operated apparatus.

Remarks

12. Applicant's arguments with respect to reference Nishikawa (5,166,693) have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thien T. Mai whose telephone number is 571-272-8283. The examiner can normally be reached on Monday through Friday, 8:00 - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Lee can be reached on 571-272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Thien T Mai
Examiner
Art Unit 2876

TM
7/9/2007


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